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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,330	04/22/2004	Keiji Kataoka	H64-167117M/MAK	6803

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EXAMINER

CHOW, LIXI

ART UNIT PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/829,330

Applicant(s)

KATAOKA ET AL.

Examiner

Lixi Chow

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-10 are pending in this application.

Drawings

2. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 1 recites in part, "wherein a relative refractive index difference of the optical fiber is in a range of from 0.1% to 0.2%". However, it is noted that it is not possible to have a relative refractive index difference of the optical fiber when there is only one optical fiber. Furthermore, claim 2 recites in part, "the semiconductor laser comprises a plurality of semiconductor lasers", "the laser module comprise a plurality of laser modules", and "the optical fiber comprises a plurality of optical fibers" (emphasis added). However, such limitations

contradict with the limitations set forth in claim 1, i.e., a semiconductor laser, an optical fiber, and a laser module. Accordingly, the subject matter claimed in claims 1 and 2 is indefinite.

It is suggested that Applicant amends the claims to include, “a semiconductor laser array”, “an optical fiber array”, and “a laser module array” to resolve the above problems.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4 and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishikawa et al. (US 6,894,712; hereafter Ishikawa).

Regarding claim 1:

Ishikawa discloses an optical recording apparatus comprising:

a semiconductor laser (see Fig. 9A, element 66) having a blue color wavelength and generating a light beam (see col. 10, lines 20-25; GaN laser diode produces blue color wavelength);

an optical fiber (see Fig. 9A, element 30);

a laser module (see Fig. 9A, element 64) which guides the light beam of the semiconductor laser to the optical fiber; and

an optical recording medium (see Fig. 4, element 170) which is applied an output beam from the optical fiber to form a latent image, wherein a relative refractive index difference of the

optical fiber is in a range of from 0.1% to 0.2% (since the optical fibers are similar to each other, it is inherent that the relative refractive index difference of the optical fiber is in the range of 0.1% to 0.2%), a core diameter of the optical fiber is 4.5 μ m or less (see col. 24, lines 1-3) and a diameter of a beam spot emitted from the optical fiber is 3 μ m or more (it is inherent that the beam spot emitted from the optical fiber is 3 μ m or more, because the wavelength and the core diameter are in accordance with the range specified in the claim).

Regarding claim 2:

Ishikawa discloses the optical recording apparatus according to claim 1, wherein the semiconductor laser comprises a plurality of semiconductor lasers (see Fig. 9A, element 66 is made of array of semiconductor laser); the laser module comprises a plurality of laser modules (see Fig. 9A, elements 64), the optical fiber comprises a plurality of optical fibers (see Fig. 9A, elements 30), wherein respective optical fibers are aligned at an equal interval in an array (see Fig. 9A).

Regarding claims 3 and 4:

Ishikawa discloses the optical recording apparatus according to claim 1 or 2, wherein a wavelength of the semiconductor laser is in a range of from 390 nm to 450 nm (see col. 10, lines 20-25).

Regarding claim 9 and 10:

Ishikawa discloses the optical recording apparatus according to claim 1 or 2, wherein the latent image is visualized and printed on a recording medium (see Fig. 4, elements 170 and 168).

Conclusion

7. Claims 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regards to claims 5 and 7, none of the reference of record alone or in combination disclose or suggest the optical recording apparatus, **wherein a spot of the output beam applied to the optical recording medium has a single peak circular light intensity distribution.**

In regards to claims 6 and 8, none of the reference of record alone or in combination disclose or suggest the optical recording apparatus, **wherein a spot of the output beam applied to the optical recording medium has a single peak elliptic Gaussian light intensity distribution.**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Horie (US 6,700,855) and Anatoliy et al. (USP 2005/0083826) are cited, because they both disclose an optical recording apparatus comprising a laser source for generating a light, and an optical fiber array, wherein the light is transmitted by the optical fiber array.

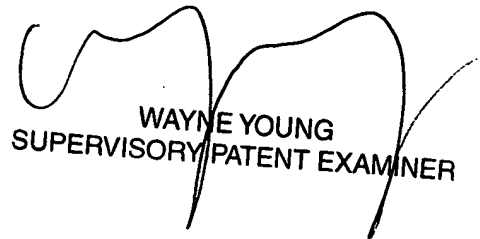
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LC 2/15/07


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER